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CENTRAL FAX CENTERApplication No.: 10/575,018
Attorney Docket No.: 2584SG-3

MAY 27 2009

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) An insulating element in the form of a plate or roll felt for shipbuilding, from comprising mineral fibers, made of bonded fibers soluble bound in a physiological agent, especially insulating element, wherein the insulating element may be utilized as fire and/or thermal and/or sound protection, characterized in that wherein the composition of the mineral fibers of the insulating element amounts to an alkali/alkaline-earth mass ratio of < 1 , and wherein the fiber structure of the insulating element is determined comprised of a bead portion in the mineral fibers in an amount $< 1\%$ of the insulating element exempt of beads as well as by an average geometrical fiber diameter of $\leq 4\text{ }\mu\text{m}$, a surface weight of 0.8 through 4.3 kg/m^2 , and wherein a portion of a bonding agent, which referred to of the fiber mass of the insulating elements in relation to the mineral fibers is in the range above of 0.5 through 4% by weight. %.

wherein the weight per unit area of the insulating element with a Fire Resistance Category A15 or similar is in the range of about 0.8 to 1.4 kg/m^2 , with a Fire Resistance Category A30 or similar, about 1.2 to 1.8 kg/m^2 , and with a Fire Resistance Category A60 or similar, about 2.0 to 2.5 kg/m^2 ;

wherein the insulating element is compressible in a minimum ratio of $2:1$, corresponding to an upper gross density up to 50 kg/m^3 , and is further compressible in a maximum ratio of $3:1$, corresponding to an upper gross density up to 30 kg/m^3 .

2. (Currently Amended) The insulating element according to claim 1, wherein characterized in that the bonding agent is an organic bonding agent.

3. (Currently Amended) The insulating element according to claim 1, wherein characterized in that the portion of the bonding agent, in relation to the mineral fibers mass of the insulating element, lies within the range of 0.5 to 3% by weight, %, in particular 0.5 to 2 weight %.

4. Canceled.

Application No.: 10/575,018
Attorney Docket No.: 2584SG-3

5. (Currently Amended) The insulating element according to claim 1, particularly adapted for the insulation ship of a vessel's bulkhead, characterized in that wherein the weight per unit area of the insulating element with a Fire Resistance Category A15 or similar is in the range of about amounts from 0.8 to 1.4 kg/m², preferably 1.2 kg/m², with a Fire Resistance Category A30 or similar, from 2.3 to 3.0 kg/m², preferably 2.7 kg/m², and with a Fire Resistance Category A60 or similar, from 3.2 to 4.3 kg/m², preferably 4.0 kg/m².

6. (Currently Amended) The insulating element according to claim 1, by the fact characterized in that wherein the insulating element it features an λ -value arithmetic procedure of ≤ 35 mW/mK.

7. Canceled.

8. Canceled.

9. (Currently Amended) The insulating element according to Claim 1 wherein the insulating element is in the form of roll felt, in accordance with preamble of claim 1, characterized in that wherein the composition of the mineral fiber of the insulating element amounts to an alkali/alkaline-earth mass ratio of <1 , and wherein the fiber structure of the insulating element is determined by an average geometrical fiber diameter of ≤ 4 μ m and the roll felt features is substantially in the form of a stepped wire mat, whose utilization temperature is > 500 °C with gross densities between 45 and 75 kg/m³, especially between 55 and 65 kg/m³, and a wherein the bonding agent content is about < 2 weight %, especially between 0.5 and 1.5 weight %.

10. (Currently Amended) The insulating element according to claim 1, characterized in that wherein the mineral fibers of the insulating element are manufactured by an internal centrifugation in the a centrifuge basket procedure, with a wherein the temperature at the centrifugation basket is of at least $1,100$ $1,100$ °C.

11. (Currently Amended) The insulating element according claim 1, characterized in that it is designed for wherein the insulating element is operatively associated with a surpassing insulation of vessel's frames.

12. (Currently Amended) The insulating element Molded section according to claim 11, characterized in that wherein the insulating element molded section features a further comprises at lease one lamination, like selected from one of an aluminum foil or a glass cloth

MAY 27

Application No.: 10/575,018
Attorney Docket No.: 2584SG-3

fleece, being applied in such a manner around the frames of a vessel such that it encloses these insulating element and the at least one lamination units in one processing step exempt of a thermal bridge.

13. (Currently Amended) The insulating element and/or molded element according to claim 1, ~~characterized in that~~ wherein the mineral fibers of the insulating element ~~and/or molded element~~, correspond, regarding their solubility in a physiological agent environment, to at least one of the requirements of the European guideline 97/69/EG and/or the requirements of the German dangerous material regulation exp. IV NR. 22.

14. (Currently Amended) The insulating element and/or molded element according to claim 13, ~~characterized by~~ wherein the following ranges of the chemical composition of the mineral fibers are as follows:

SiO ₂	39-55	%	preferably	39-52	%
Al ₂ O ₃	16-27	%	preferably	16-26	%
CaO	6-20	%	preferably	8-18	%
MgO	1-5	%	preferably	1-4.9	%
Na ₂ O	0-15	%	preferably	2-12	%
K ₂ O	0-15	%	preferably	2-12	%
R ₂ O (Na ₂ O + K ₂ O)	10-14.7	%	preferably	10-3.5	%
P ₂ O ₅	0-3	%	especially	0-2	%
Fe ₂ O ₃ (iron total)	1.5-15	%	especially	3.2-8	%
B ₂ O ₃	0-2	%	preferably	0-1	%
TiO ₂	0-2	%	preferably	0.4-1	%
Other	0-2.0	%			

15. (New) An insulating element in the form of a plate or roll felt for shipbuilding, comprising:

mineral fibers, made of bonded fibers soluble in a physiological agent, and further comprising an organic bonding agent;

wherein the insulating element may be utilized as fire and/or thermal and/or sound protection;

Application No.: 10/575,018
 Attorney Docket No.: 2584SG-3

wherein the composition of the mineral fibers of the insulating element amounts to an alkali/alkaline-earth mass ratio of < 1 ;

wherein the insulating element is comprised of a bead portion in the mineral fibers in an amount $< 1\%$ of the insulating element as well as by an average geometrical fiber diameter of $< 4\text{ }\mu\text{m}$, and a surface weight of 0.8 through 4.3 kg/m^2 ;

wherein the organic bonding agent of the insulating element, in relation to the mineral fibers, is in the range of 0.5 through 4% by weight;

wherein the surface weight of the insulating element with a Fire Resistance Category A15 is in the range of about from 0.8 to 1.4 kg/m^2 , with a Fire Resistance Category A30 about from 1.2 to 1.8 kg/m^2 , and with a Fire Resistance Category A60 about from 2.0 to 2.5 kg/m^2 ;

wherein the mineral fibers of the insulating element are manufactured by internal centrifugation in a centrifuge basket procedure, wherein the temperature at the centrifugation basket is at least $1,100^\circ\text{C}$;

wherein the mineral fibers of the insulating element correspond, regarding their solubility in a physiological agent, to at least one of the requirements of the European guideline 97/69/EG and the requirements of the German dangerous material regulation exp. IV NR. 22; and

wherein the ranges of chemical composition of the mineral fibers are as follows:

SiO ₂	39-55	%	preferably	39-52	%
Al ₂ O ₃	16-27	%	preferably	16-26	%
CaO	6-20	%	preferably	8-18	%
MgO	1-5	%	preferably	1-4.9	%
Na ₂ O	0-15	%	preferably	2-12	%
K ₂ O	0-15	%	preferably	2-12	%
R ₂ O (Na ₂ O + K ₂ O)	10-14.7	%	preferably	10-3.5	%
P ₂ O ₅	0-3	%	especially	0-2	%
Fe ₂ O ₃ (iron total)	1.5-15	%	especially	3.2-8	%
B ₂ O ₃	0-2	%	preferably	0-1	%
TiO ₂	0-2	%	preferably	0.4-1	%
Other	0-2.0	%			